

Abstracts

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data on patient demographics, functional status, and mobility, for consenting patients, and then the patients entered information regarding functional abilities, satisfaction, pain, quality of life and cost of care. **RESULTS:** A total of 43 patients participated in the pilot survey. Respondents were predominantly insured through Medicare (43%) and 68% were men. With regard to functional abilities, 19% of the consumers required help with at least one activity of daily living. The percent of consumers experiencing an improvement in their ability to perform activities such as exercise, walking, bathing and dressing independently, all after receiving their device ranged from 18% to 51%. Consumers also reported improved mood (64.9%), high satisfaction with their device (81.1%) and their provider (100%), and improved confidence (73%) after using their device. Several patients reported problems with ability to pay the out-of-pocket costs for their device (12.5%) or to afford device repair costs (9%). **CONCLUSIONS:** Preliminary results suggest that collecting outcomes data on this population is feasible, and that patients are benefiting from their O&P devices, through improved functional ability and emotional status. The systematic collection of patient reported outcomes may help to demonstrate the comparative effectiveness and value of O&P devices, and ultimately inform health insurance coverage decisions.

PHP103

WHEN ARE DIAGNOSTIC LABORATORY TESTS COST-EFFECTIVE? A SYSTEMATIC REVIEW OF COST-UTILITY ANALYSES

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OBJECTIVES: Diagnostic laboratory tests may add critical information to guide treatment and improve patient outcomes, but payers have often questioned its value. We reviewed the methodology and results of published cost-utility analyses (CUAs) of laboratory tests through 2008. **METHODS:** We screened all papers related to laboratory diagnostic tests in the Tufts Medical Center Cost-effectiveness Analysis Registry (www.cearegistry.org) which contains detailed information on over 2,000 published CUAs from 1976 to 2008. In addition to the standard auditing process, we recorded information on the reported test accuracy and IVD cost. We also captured whether any account was taken for potential value (or harm) unrelated to treatment consequences such as the "reassurance value of testing" or additional anxiety produced by test information. **RESULTS:** We identified 141 published CUAs pertaining to diagnostic laboratory tests, which contained 433 separate incremental cost-effectiveness ratios (ICER). The number of publications has increased rapidly in recent years. The most common areas of clinical application were hematology/oncology (n = 42, 29.8%), and OB/GYN (n = 36, 25.5%). Approximately 63% (89/141) of studies addressed the accuracy of the test. Only 10% (14/141) mentioned test safety or associated risks. A small number (n = 13, 9.2%) of CUAs mentioned or considered the potential value or harm of testing unrelated to treatment consequences. Over 55% of the reported ICERs were either dominant (more QALYs for less cost), or below \$50,000 per QALY gained (in \$US 2008). **CONCLUSIONS:** The number of CUAs evaluating laboratory tests technologies has increased substantially with applications to diverse clinical areas. The vast majority of CUAs have not attempted to measure the potential value or harms of diagnostic testing unrelated to treatment.

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THE BUDGET IMPACT OF ORAL NUTRITIONAL SUPPLEMENTS IN THE COMMUNITY SETTING IN THE NETHERLANDS

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OBJECTIVES: To assess the budget impact of introducing oral nutritional supplements (ONS), being a medical nutrition product, in elderly patients from the perspective of the society in The Netherlands in 2009. **METHODS:** A model was developed to calculate the budgetary impact of using ONS in patients who are eligible for ONS due to disease-related malnutrition (DRM). The analysis is based on the cohort of elderly patients (>65 years) in the community setting in The Netherlands in 2009. The budget impact of ONS was assessed using a linear decision analytic model reflecting cost functions related with DRM. The model allowed the assessment of the cost reductions resulting from improvement in DRM due to treatment with ONS. Clinical probabilities and resource utilization were based on clinical trials and published literature; cost data were from official price tariffs. **RESULTS:** The use of ONS leads to annual cost savings of €13.3 million (18.9%), when all eligible patients are treated. The additional costs of ONS (€57.0 million) are more than balanced by a reduction on other health care costs (€70.3 million). Sensitivity analyses were performed on all parameters, including duration of treatment with ONS and the proportion of DRM. These results showed that the use of ONS in all sensitivity analyses leads to cost savings. **CONCLUSIONS:** This budget impact analysis shows that the use of ONS in eligible elderly patients in the community setting leads to a positive impact on the national health care budget in The Netherlands.

THE UTILIZATION OF PARENTERAL NUTRITION IN THE UNITED STATES

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OBJECTIVES: Parenteral nutrition (PN) is used with patients when oral or enteral nutrition isn't possible or adequate. Compared to other therapeutic interventions, relatively little is known about the real-world use of PN, the characteristics of patients who receive it, or the incidence of adverse events. Our objective was to explore PN as it is currently utilized in the United States, using a large, nationally representative inpatient database. **METHODS:** We examined the Premier PerspectiveTM database for all inpatients who received any PN between 2005 and 2007. Inpatients admitted with any outcome of interest (i.e., bacterial infection, hepatic dysfunction, hypoglycemia, acute cholecystitis, and phlebitis) were excluded. Hospital (e.g., bed size, geographic location, urban/rural status), patient (e.g., age, sex, comorbidities, severity), and PN characteristics were analyzed. **RESULTS:** Of over 11 million inpatients in the database, 68,984 adult, 3,083 pediatric and 34,307 neonates received PN. The average age of the adult patients was 66. Whites had a disproportionately higher probability of receiving PN (73.1%) than any other ethnic group. 46.2% of PN adult patients received PN in hospitals with bed size of 250-499, followed by hospitals with bed size of 500-749 (31.5%), and hospitals with bed size 50-249 (20.3%). Among adult PN patients, 38.9% were diagnosed with a malignancy, followed by undernutrition 33.2%, renal failure 31.3%, diabetes 24.4%, peritonitis 9.0%, acute pancreatitis 8.4%, and cirrhosis 7.6%. Compared to neonates, the infection rates and bloodstream infection rates (BSI) of the adult population were much higher (infection, 49.0% vs. 10.7%; BSI 26.9% vs. 1.7%). Most patients were primarily diagnosed with intestinal or peritoneal adhesion with obstruction (ICD-9 560.81). The majority of PN adult patients used procedure of venous catheterization (ICD-9 38.93). **CONCLUSIONS:** Large retrospective databases provide us with extraordinary insights to understand the characteristics of this vulnerable population and the real-world use of PN.

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THE HEALTH ECONOMIC IMPACT OF ORAL NUTRITIONAL SUPPLEMENTS IN THE COMMUNITY SETTING IN THE NETHERLANDS

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OBJECTIVES: To assess the health economic impact of oral nutritional supplements (ONS), being a medical nutrition product, in elderly patients from the perspective of the society in The Netherlands in 2009. **METHODS:** This health economic analysis is based on a comparison of the use of ONS versus "no ONS" in patients who are eligible for ONS due to disease-related malnutrition (DRM). The base case analysis is based on a comparison in elderly patients (>65 years) in the community setting. The costs of the two treatment strategies ONS versus "no ONS" were assessed using a linear decision analytic model reflecting costs related with DRM. The model structure allowed for differences in costs for ONS and other resource utilization. Clinical probabilities and resource utilization were based on clinical trials and published literature; cost data were from official price tariffs. **RESULTS:** The use of ONS reduces the total costs from €1353 to €1180, which corresponds with a €173 (12.8%) cost savings per patient. The additional costs of ONS are more than balanced by a reduction on hospitalization costs. Sensitivity analyses were performed on all parameters, including the risk of hospitalization and improvement of DRM. These results showed that the use of ONS in all sensitivity analyses leads to cost savings. **CONCLUSIONS:** This health economic analysis shows that the use of ONS in elderly patients in the community setting is a cost-effective treatment in The Netherlands and is dominant over standard care without ONS: it leads to cost savings and a higher effectiveness.

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THE HEALTH ECONOMIC IMPACT OF ORAL NUTRITIONAL SUPPLEMENTS IN THE HOSPITAL SETTING IN GERMANY

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OBJECTIVES: To assess the health economic impact of oral nutritional supplements (ONS), being a medical nutrition product, in hospitalized patients from the society perspective in Germany in 2009. **METHODS:** This health economic analysis is based on a comparison of the use of ONS versus "no ONS" in hospitalized patients who are eligible for ONS due to disease-related malnutrition (DRM). The costs of the two treatment strategies ONS versus "no ONS" were assessed using a linear decision analytic model reflecting costs related with DRM. The model structure allowed for differences in costs for ONS and length of stay. Clinical probabilities and resource utilization were based on clinical trials and published literature; cost data were from official price tariffs. **RESULTS:** The use of ONS reduces the total costs from €4105 to €3967, which corresponds with a €138 cost savings per patient. The additional costs of ONS are more than balanced by a reduction on hospitalization costs. Sensitivity analyses were performed on all parameters, including length of stay and improvement of DRM. These results showed that the use of ONS in all sensitivity analyses leads to cost savings. **CONCLUSIONS:** This health economic analysis shows that the use of ONS in patients in the hospital setting is a cost-effective treatment in Germany